+135-3858-6433 (GuangDong)
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TEKNOR APEX

Telcar® TL-3050-88

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Telcar TL-3050-88 is a general purpose thermoplastic elastomer designed for electrical applications requiring flexibility over a wide temperature range. Telcar TL-3050-88 is a high durometer grade that is RoHS compliant. This grade is UL listed and is suitable for both injection molding and extrusion.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• General Purpose • Good Colorability • Good Flexibility • Good Melt Strength	• Halogen Free • High Elasticity • High Elongation • High Hardness	• High Tensile Strength • Low Flow
Uses	• Connectors • Electrical Parts • General Purpose	• Grommets • Insulation • Strain Reliefs	• Weatherstripping • Wet Rated Insulation • Wire & Cable Applications
Agency Ratings	• UL 1581 [1]		
RoHS Compliance	• RoHS Compliant		
UL File Number	• QMTT2.E73402		
Appearance	• Colors Available	• Natural Color	• Translucent
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties [2]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.900		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Flexural Modulus	40600	psi	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [3, 4] (100% Strain, 0.0200 in)	900	psi	ASTM D412
Tensile Stress [3, 4] (300% Strain, 0.0200 in)	1130	psi	ASTM D412
Tensile Strength [3, 4] (Break, 0.0200 in)	2980	psi	ASTM D412
Tensile Elongation [3, 4] (Break, 0.0200 in)	700	%	ASTM D412
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, 1 sec	91		
Shore A, 15 sec	88		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-76.0	°F	ASTM D746
RTI Elec	122	°F	UL 746B
RTI Str	122	°F	UL 746B

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Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air (277°F, 168 hr)	28	%	ASTM D573
Change in Ultimate Elongation in Air (277°F, 168 hr)	-7.0	%	ASTM D573
Change in Tensile Strength			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-84	%	
Change in Ultimate Elongation			ASTM D471
140°F, 168 hr, in IRM 902 Oil	-75	%	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity			ASTM D257
73°F	> 1.0E+17	ohms·cm	
122°F	> 1.0E+16	ohms·cm	
Dielectric Strength	1200	V/mil	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.10		
1 MHz	2.10		
Dissipation Factor			ASTM D150
1 kHz	8.0E-4		
1 MHz	2.8E-3		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.06 in, ALL)	HB		UL 94
Oxygen Index	17	%	ASTM D2863

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	340 to 380	°F
Middle Temperature	350 to 390	°F
Front Temperature	360 to 400	°F
Nozzle Temperature	370 to 410	°F
Processing (Melt) Temp	370 to 410	°F
Mold Temperature	77 to 150	°F
Injection Pressure	200 to 1000	psi
Injection Rate	Moderate-Fast	
Back Pressure	25.0 to 50.0	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in
Extrusion	**Nominal Value**	**Unit**
Cylinder Zone 1 Temp.	330 to 370	°F
Cylinder Zone 2 Temp.	340 to 380	°F
Cylinder Zone 3 Temp.	350 to 390	°F
Cylinder Zone 5 Temp.	360 to 400	°F
Die Temperature	374 to 410	°F

Extrusion Notes
Screw Speed: 30 to 100 rpm

Notes

[1] - approved for 75C wet location use

[2] Typical properties: these are not to be construed as specifications.

[3] Die C, 20 in/min

[4] die cut from extruded tapes